

ATTORNEY DOCKET NO. 55071-310  
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of :  
Armin LIEBCHEN : Customer No.20277  
Serial No.: 10/705,234 : Confirmation No.: 3610  
Filed: November 12, 2003 : Group Art Unit: 2851  
For: METHOD AND APPARATUS FOR PROVIDING LENS ABERRATION : Examiner: PETER B. KIM  
COMPENSATION BY ILLUMINATION SOURCE OPTIMIZATION

**INFORMATION DISCLOSURE STATEMENT**

Mail Stop Amendment  
Hon. Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In accordance with 37 C.F.R. § 1.56, the attention of the Patent and Trademark Office is directed to the cited reference(s) listed on the attached PTO-1449. The cited references are believed to be the most relevant known to Applicants and/or Assignee at this time concerning the invention as claimed in the above-captioned patent application. No representation is made or intended that more relevant information does not exist or that the order of presentation of the information in any way reflects their relative pertinence.

Applicant(s) respectfully request(s) that each of the cited information be expressly considered during the prosecution of this application and that the cited reference(s) be made of record therein and appear among the "References Cited" on any patent to issue therefrom. A copy of each reference is attached.

- ☐ 1. This Information Disclosure Statement is being filed within three months of the U.S. filing date OR before the mailing date of a first Office Action on the merits. Thus, no certification or fee is required.
- ☒ 2. This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection or Notice of Allowance.
- ☐ a. I hereby certify that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).

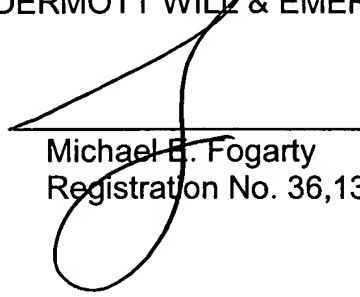
- ☐ b. I hereby certify that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 CFR § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).
- ☒ c. Please charge the amount of \$180.00 in payment of the fee under 37 C.F.R. § 1.17(p). Please credit or debit Deposit Account No. 50-0417 as needed to ensure consideration of the disclosed information. A duplicate copy of this paper is attached.
- ☐ 3. This Information Disclosure Statement is being filed more than three months after the U.S. filing date and after the mailing date of a Final Rejection or Notice of Allowance, but before payment of the Issue Fee. Applicant(s) petition(s) that the Information Disclosure Statement be considered. Please charge Deposit Account No. 50-0417 in the amount of \$180.00 for payment of the petition fee. Please credit or debit Deposit Account No. 50-0417 as needed to ensure consideration of the disclosed information. A duplicate copy of this paper is attached.
- ☐ a. I hereby certify that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).
- ☐ b. I hereby certify that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 CFR § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).

Please grant any extension of time deemed necessary for entry of this communication. Please charge any deficient fees, or credit any overpayment of fees associated with this communication to Deposit Account No. 50-0417. A duplicate copy of this communication is attached.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP

Date: 8/8/05

By:   
Michael E. Fogarty  
Registration No. 36,139

600 13th Street, N.W., Suite 1200  
Washington, D.C. 20005-3096  
Telephone: 202-756-8000  
Facsimile: 202-756-8087



SHEET 1 OF 2

<b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION</b>  (PTO-1449)				ATTY. DOCKET NO. <b>055071-0310</b>		SERIAL NO. <b>10/705,234</b>	
				APPLICANT <b>Armin LIEBCHEN</b>			
				FILING DATE <b>November 12, 2003</b>		GROUP <b>2851</b>	
<b>U.S. PATENT DOCUMENTS</b>							
EXAMINER'S INITIALS	CITE NO.	Document Number Number-Kind Code <sub>2</sub> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear		
		5,969,441	10/19/1999	Loopstra et al.			
		US 6,046,792	04/04/2000	Van Der Werf et al.			
		US 6,563,566 B2	05/13/2003	Rosenbluth et al.			
		US					
		US					
		US					
		US					
		US					
		US					
		US					
		US					
		US					
		US					
		US					
		US					
		US					
		US					
		US					
<b>FOREIGN PATENT DOCUMENTS</b>							
EXAMINER'S INITIALS	CITE NO.	Foreign Patent Document Country Codes - Number - Kind Codes (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Figures Appear	Translation Yes No	
		WO 98/40791	09/17/1998	Konin Klijke Philips Electronics N.V.			
<b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>							
EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.					
EXAMINER				DATE CONSIDERED			

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

INFORMATION DISCLOSURE CITATION IN AN APPLICATION				ATTY. DOCKET NO. <b>055071-0310</b>		SERIAL NO. <b>10/705,234</b>			
				APPLICANT <b>Armin LIEBCHEN</b>					
(PTO-1449)				FILING DATE <b>November 12, 2003</b>		GROUP <b>2851</b>			
				U.S. PATENT DOCUMENTS					
EXAMINER'S INITIALS	CITE NO.	Document Number Number-Kind Code <sup>2</sup> (if known)		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document		Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear		
		US	5,680,588	10-21-1997	Gortych et al.				
		US	5,300,786	04-05-1994	Brunner et al.				
		US	5,805,290	09-08-1998	Ausschnitt et al.				
		US	5,965,309	10-12-1999	Ausschnitt et al.				
		US	5,680,588	10-21-1997	Gortych et al.				
		US	6,033,814	03-07-2000	Burdorf et al.				
		US	6,128,067	10-03-2000	Hashimoto				
		US							
		US							
		US							
		US							
		US							
		US							
		US							
		US							
FOREIGN PATENT DOCUMENTS									
EXAMINER'S INITIALS	CITE NO.	Foreign Patent Document Country Codes -Number + -Kind Codes (if known)		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document		Pages, Columns, Lines Where Relevant Figures Appear	Translation Yes No	
		JP 2000-232057A						X	
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)									
EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.							
		BURN J. LIN, "The Exposure-Defocus Forest," Jpn. J. Appl. Phys. Vol. 33 (1994) pp 6756-6764							
		M. DUSA et al., "Study of mask aerial images to predict CD proximity and line end shortening of resist patterns," Proc. of SPIE Vol. 4349 (2001), pp. 148-159							
		B.P. MATHUR et al., "Quantitative Evaluation of Shape of Image on Photoresist of Square Apertures," IEEE Transactions of Electron Devices, Vol. 35, No. 3 (March 1988), pp. 294-297							
		CHRISTOPHER J. PROGLER et al., "Merit functions for lithographic lens design," J. Vac. Sci. Technol. B 14(6), (Nov/Dec 1996), pp. 3714-3718							
		NISHRIN KACHWALA et al., "Imaging contrast improvement for 160 nm line features using sub resolution assist features with binary, 6% ternary attenuated phase shift mask with process turned resist," SPIE Vol. 3679 (1999), pp. 55-67							
EXAMINER					DATE CONSIDERED				

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.